

IDAHO DEPARTMENT OF FISH & GAME.

Jerry M. Conley, Director

SAWTOOTH SALMON TRAP

Annual Report



1 October 1981 - 30 September 1982

by

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January 1983

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SAWTOOTH SALMON TRAP

ABSTRACT

A portable chinook salmon trap was installed at the future Sawtooth Hatchery site on the upper Salmon River in July of 1982.

Two hundred sixty-two spring and summer chinook were trapped between 29 July and 26 September.

An undetermined portion of the run passed through the site before the trap was installed.

Eggs were taken from 82 females, for a total of 451,902 green eggs. The average number of eggs-per female was 5,511.

A temporary raceway was installed by the Boise Engineering crew. It was used to hold 20,625 spring chinook fingerlings from 22 July to 4 October. The fingerlings were examined periodically for the eye-fluke parasite present in that area.

Steelhead smolts were planted at the Sawtooth Hatchery site and East Fork trap site in spring of 1982.

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OBJECTIVES

The objectives of the Sawtooth Salmon Trap are to:

1. Collect approximately 50% of the spring chinook salmon run until 200 females and about 100 males have been retained in the holding pond.
2. Spawn the salmon as they ripen and ship the green eggs to McCall Salmon Hatchery.
3. Provide a release point for salmon smolts from McCall Hatchery that will return two-to-three years later for egg-taking purposes.
4. The returning salmon will provide an egg bank for the Sawtooth Salmon Hatchery that will be constructed in 1983 and 1984.

INTRODUCTION

A large spring chinook salmon hatchery will be constructed during 1983 and 1984 at the site of the old Decker Flat salmon rearing pond area. The capacity will be 2.2 million smolts a year, to be released into the upper Salmon River and the East Fork of the Salmon River. The hatchery is being funded by the Army Corps of Engineers for mitigation for dams built on the lower Snake River.

The hatchery will also collect steelhead eggs to supply two hatcheries in the Hagerman area. The steelhead smolts will be planted in the upper Salmon River to establish a steelhead run for sport fishing and egg-taking purposes.

The first planting of steelhead smolts was done in the spring of 1981 from the Hagerman National Hatchery. These eggs were taken from the stock at Idaho Power Company's Pahsimeroi Hatchery. These smolts will be planted each spring, and the number will be increased when the new hatchery at Crystal Springs has been constructed.

The first spring chinook salmon smolts will be planted in the spring of 1983, and will return in 1985 and 1986. The salmon trapping we did this summer was to establish an egg bank for this program.

SAWTOOTH SALMON TRAP

A temporary trap was installed at Decker Flat in Stanley Basin during the summer of 1982. The trap was installed and operating by 29 July. The trap was installed later this year due to high water from melting snow fields at higher elevation. The trap was operated until 26 September.

WEIR COUNT

During this period, 262 spring and summer chinook were trapped. The run portion trapped consisted of 111 females, 135 males, and 16 jacks. There is no estimate on the percentage of the run that was trapped due to the late date that the trap was installed.

HOLDING POND MORTALITY

During the time the salmon were held in the pond, eight males and 17 females were lost due to confinement.

LENGTH-FREQUENCY

<u>Size</u>	<u>Males</u>	<u>Females</u>
0-22	16	0
23	2	0
24	4	0
25	10	0
26	8	0
27	10	0
28	10	0
29	16	1
30	12	3
31	4	6
32	16	6
33	10	13
34	4	20
35	4	8
36	6	13
37	8	20
38	2	9
39	6	8
40	2	3
41	1	1
Totals	151	111

EGG TAKE HISTORY

Date	Ounces	<u>No. per/oz.</u>	<u>Number</u>	<u>Females</u>
8/09	311	94.7	29,490	5
8/12	274	84.0	23,022	5
8/16	520	97.0	50,471	10
8/19	660	84.0	55,418	11
8/23	1,075	84.0	90,301	15
8/26	418	88.0	36,743	10
8/30	768	78.0	59,929	9
9/02	498	84.0	41,790	6
9/07	456	90.0	41,080	7
9/10	<u>303</u>	78.0	<u>23,658</u>	4
Totals	5,283		451,902	82

The green eggs were water hardened and then put in metal coolers, iced, and flown to McCall Hatchery by airplane. The fry will be reared to smolt size and transported back in spring of 1984 to be released.

CODED-WIRE TAG RECOVERIES

<u>Snout #</u>	<u>Fork Length</u>	<u>Sex</u>	<u>Date</u>
1	34 in	F	8/19/82
2	26 in	F	8/19/82
3	34 in	F	8/23/82
4	28 in	M	8/26/82
5	34 in	F	8/26/82
6	34 in	M	8/31/82

Six snouts were collected from adipose fin-marked adults. These fish are from the 1979 smolt release from Mackay Hatchery. About 26% of the fish captured this year were from the hatchery release in 1979.

STEELHEAD SMOLT RELEASES

During April and May, steelhead smolt releases were made on the East Fork Salmon River and Sawtooth Hatchery site by the Hagerman National Hatchery. East Fork received 58,384 B smolts and Sawtooth site received 359,772 A smolts. These fish will be trapped upon returning by the Sawtooth Hatchery Complex. The eyed eggs will be shipped to Hagerman National Hatchery and Crystal Springs Steelhead Hatchery for rearing.

EYE FLUKE

An eye fluke parasite, Diplostomum, is present in tributary waters of the Salmon River, and presented a problem in the Decker Flat Rearing Pond that was operated several years ago. Dr. Richard Heckman (B.Y.U.) studied the river system during the summer of 1982 to see what species of wild fish were affected by the parasite. The parasite was most prevalent in the sculpin and whitefish. Trout species were least affected.

A temporary raceway was set up by the Engineering crew from Boise. Some 20,625 spring chinook fingerlings were transferred from McCall Hatchery on 22 July 1982. The fish were removed from the raceway on 4 October and released into the Salmon River. The fingerlings were 275 per pound on 22 July and 56 per pound on 4 October. The fingerlings were checked on two visits by Dr. Heckman and all mortalities were saved to be examined. The fingerlings were found to be nearly free of parasites and the raceway rearing at the new hatchery should not present any problems.

ACKNOWLEDGEMENTS

Arnie Miller-Laborer, was assigned to stay at trap and take care of daily work.

Bob Moore-Project Leader.

Brad Christensen-Salmon spawning.

Help was received from the Engineering crew from Salmon Shop in installing and dismantling the trap. Help was also received from the Sawtooth NRA in installing the trap.